

ABSTRACT OF THE DISCLOSURE

[041] A variable adaptive mask is provided that can be dynamically modified in situ in a physical vapor deposition process. The mask comprises a fixed mask portion, a plurality of channels extending through the fixed mask portion, a control mechanism for controlling throughput of a vaporized target material through the channels, and a mechanism to mount the mask in a fixed position relative to a solid target material and a substrate. In one embodiment, a magnetic control mechanism is provided to control throughput of the vaporized target material through the channels. In another embodiment, a thermal control mechanism is provided to control throughput of a vaporized target material through the channels. Methods of controlling a physical vapor deposition process using the adaptive mask are also disclosed.

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